Release Notes

Intel® RealSense™ Depth Camera Manager (DCM) 1.4 HF3-WU2

This release notes covers Release 1.4 HF3-WU2 of Intel® RealSense™ Depth Camera Manager F200 These are for use with Intel RealSense F200 Camera.
This release notes is relevant only to the Windows Update version of DCM 1.4.

Please refer to the "Intel RealSense 3D Camera Software License.rtf" for license terms and conditions.

This release has a number of known issues. These issues may be addressed with software updates in the future. Please see your Intel representative for additional support.

3D Camera Management:

The Intel RealSense Depth Camera Manager (DCM) system is intended to expose interface to streaming video from a depth camera, for both color and depth.

Components:

- **Intel RealSense™ Depth Camera Manager Service -** The camera service is a Microsoft* Windows* based service that runs on the client machine. The camera service allows multiple Intel RealSense SDK applications and a single non SDK application to access data from the camera simultaneously, without blocking each other.
- **Intel RealSense™ 3D Camera Virtual Driver -** The camera virtual driver is a Microsoft Windows based AVStream driver that runs on the client machine. The camera virtual driver allows non-SDK application to access camera streams as if they are connecting directly to the camera and without blocking other SDK applications.

Hardware Requirements

- 4th generation (code named Haswell) i3, i5, i7 or later Intel® Core™ processor
- 150 MB free hard disk space, 4GB RAM
- The Intel RealSense™ F200 Camera ○ PRQ Camera with firmware version 2.60.0
- A free USB 3 port for the Intel RealSense™ 3D Camera, or a dedicated connection for integrated camera.
  IMPORTANT NOTE: To support the bandwidth needed by the camera, a **USB3** interface is required. This interface must be connected to a **dedicated** USB3 port within the client system (do not use a hub).

Software Requirements:

- Microsoft Windows 8.1 August Update 64 bit

- Microsoft KB Article 2978137, 2919355 and 2966804

- Microsoft Windows 10 RTM version and above.

Installation:

Windows Update packages are automatically installed by the Windows OS. In order to manually install the DCM package follow those steps:

For INF install:

- Unzip 1769854.zip if a zip file was received.

- Right click on the RealSenseF200Depth.inf file and select "Install".

For EXE install:

- Unzip intel_rs_dcm_f200_1.4.27.52404.zip if a zip file was received

- Run the DCM installer (intel_rs_dcm_f200_1.4.27.52404.exe)

New features in this release:

No new features

Issues resolved

- Fix a bug for iSource providers registry key handling
- Fix for bug removing iSource provider's registry key at package uninstallation or upgrade.
- Fix for R200 and F200 DCMs coexistence
- Additional iSource provider bug fixes

Known Limitations:

- The following are issues specifically with the Depth Camera Manager SW:

Issue	Recovery
Image rotations isn't supported for DirectShow application	Image rotations is supported for applications that are written over MF
Camera isn't detected when switching peripheral cameras	Restart the DCM service
If the Metro Camera app open and using the F200 camera and suspends/hibernates the machine, occasionally upon resume the camera image will not return automatically. Work around, close the Camera application and restart it, or switch cameras.	close the Camera application and restart it, or switch cameras

SDK applications are not working when an application tries to connect to one of the following cameras: Intel(R) RealSense(TM) 3D Camera (Front F200) Depth Intel(R) RealSense(TM) 3D Camera (Front F200) RGB Using either of the physical cameras can block SDK applications	Connect applications to the Intel® RealSense™ 3D Camera Virtual driver instead
Sporadic streaming failures on return from hibernate both over virtual driver and for SDK apps.	Restart the application. If this does not resolve the issue, restart the Intel Depth Camera manager service
UVMap is cut off in HVGA and QVGA Resolutions	Do not use UVMap when the camera is configured to HVGA and QVGA modes
Uninstalling DCM while SDK applications are streaming may cause application to crash.	Close all SDK applications before uninstalling DCM.
Camera power management does not work when the application is switching to battery mode before streaming	Application should switch to power management battery mode only after receiving the first frame
DCM hangs when application crashes while Windows crash dialog appears	Close the dialog message box
Some users may get the error that DCM installation cannot continue since there is no free disk space when really there is enough space.	Remove manually file file C:\Program Files (x86)\Intel\RSDCM and try performing installation again. Or run installer in silent mode
"Intel(R) RealSense(TM) 3D Camera Virtual Driver" is not restored after reset machine to factory default.	DCM should be reinstalled.
Restart of DCM service while the SensorDataService is running causes MSFT's Sensor Data Service to crash when the SensorDataService Stops	No work around needed SensorDataService will recover automatically and next start will succeed. Fix will be available in future release.
Camera led stays on after trying to stream via service while streaming via MF with IVCAM's Depth device	Restart Intel® real sense DCM Service
Windows Hello wake up after hibernate might take up to 6 seconds.	No workaround will be fixed in a future release.

The following are issues specifically with the INF based installation flow of Depth Camera Manager SW:

Issue	Recovery
Text related to DCM Windows Update package displayed in Windows->Settings->Update is English only.	No localization available at this time for this driver.
If Windows Update package was installed on top of DCM version with same version. DCM may stop streaming.	Restart the RealSenseDCM service or reboot the system.

Windows system restore process leaves DCM partly installed.	Install a DCM package (WU or standard installer) which is same version or newer than the package installed before.
If DCM WU package installation fails, Depth device driver might be installed however DCM is not. In this scenario Windows update for the driver will not be triggered again.	Uninstall Intel® RealSense 3D Camera (Front F200) Depth device from device manager and rescan for hardware changes, DCM installation should restart.
When upgrading/reinstalling the DCM or Depth device driver on a system with Windows Hello configured, Windows Hello might temporary stop working.	Face login option will be automatically restored in 5-20 min or reboot the system for faster recovery.

The following significant issues in 1.4 were resolved in 1.4 HF2

Issue
Re-enable configuration of power line frequency to Auto. Microsoft errata id for Windows 10 HLK 5679

The following significant issues in 1.4 were resolved in 1.4 HF1

Issue
Virtual driver is Certified for Windows 10 (compatible with Windows 8.1)
ACPI driver is Certified for Windows 10 (compatible with Windows 8.1)
Fixed Power Line Frequency test in system WLK
Fixed long latency when resetting all device properties.

The following significant issues in 1.3 were resolved in 1.3 HF

Issue
Stream is not resumed after Sx

The following significant issues in 1.2 HF2 were resolved in 1.3

Issue
QueryProperty IVCAM_PROPERTY_COLOR_PRINCIPAL_POINT returns value in out of image size is fixed.
Fixed service crash in unplug/plug during streaming

Fix race condition on Sx with virtual driver
Separate depth and color timestamps when using sync streams.
Projection returned wrong values if it was queried before starting the stream
Fix corrupted frames over virtual driver when using adaptive sync stream

The following significant issues in 1.2 were resolved in 1.2 HF2

Issue
A memory leak that happened during start/stop cycle was fixed
A bug with IR & RGB24 backwards computability for applications build with SDK Core gold version
Fixed a "KS Properties bug", which caused hang during setting camera properties
A fix for two corrupted pixels

The following significant issues in 1.2 were resolved in 1.2 HF1

Issue
Path to executable of DCM driver in services is not under quotes and create a security risk.

The following significant issues in 1.1 were resolved in 1.2

Issue
Direct Show applications sometimes fail to stream video over virtual driver.
Virtual driver should no longer requires restart on install or update, resolving remaining scenarios in which this would happen.
Issue where During interactive install of the DCM SW, the install path displayed to the user is: *"C:\Program Files(x86)\Intel\RSDCM"* Which is the incorrect path was resolved.
Low FPS in streaming over virtual Driver 424x240x60 was resolved.

The following significant issues in 1.0.2 were resolved in 1.1

Issue
System WHCK Failures
ProjectColorToCamera and ProjectCameraToColor returns points with offset to the original
Changing camera frequency from PXCCapture::Device doesn't work
Failures on Camera unplug / re-plug

The following significant issues in 1.0.1 were resolved in 1.0.2

Issue
InternalUsbIdle WHCK Failure
Due to issue in service setting camera properties other than White Balance and Exposure over virtual driver would fail.
Misalignment of properties values with RealSense SDK could cause wrong value to be passed to camera

Major issues in 1.0.0 that were resolved in 1.0.1

Issue
In some cases SDK apps over DCM could prevent systems from entering S3 while streaming depth and color at the same time
In rare cases an open thread may prevent applications from closing after working with DCM. Observed only in C# application
Depth stream may get stuck when a module attempts to enable IVCam Power Saving mode while another application is streaming over virtual driver.
When installing DCM with driver that hasn't been WHCK signed a windows security dialog requests confirmation for driver installation. Selecting "don't install" cancels installation leaving unknown device in device manger. Installing again and approving security prompt without first removing this device will cause duplicate driver installation which can cause BSOD.
During silent install when installing DCM with driver that hasn't been WHCK signed a windows security dialog will appear interrupting silent installation.
Cannot change resolution when streaming by windows store application over the virtual driver.
Camera may stay on when suspending into S3 during color + depth streaming – Observed on nonintegrated (peripheral) USB3 cameras only
Issue
When SDK application is streaming using a resolution not supported by standard application app will be unable to stream over the virtual driver
Projection calculated in Left Handed coordinate system even when stream is in Right Handed coordinates
Initial IR frame on stream start is invalid
DCM exposed 640x240x120 IR Profile instead of 640x240x110
Windows Store Camera app stopped working after SDK app start/stop
Streaming over DCM doesn't work after connected standby